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Observations on the Genus Ocythoë of Rafinesque, with a Description of a new Species. By William Elford Leach, M.D. F.R.S. Read June 5, 1817. [*Phil. Trans.* 1817, p. 293.]

Several ancient and modern writers have described a species of Ocythoë often found in the Paper Nautilus, and have considered it as belonging to that shell. Sir Joseph Banks and other naturalists have maintained a contrary opinion, and have considered the Ocythoë as a parasitical inhabitant of the Argonaut's shell. Rafinesque, whose opportunities for observation were commensurate with his talent in observing, regarded it as a peculiar genus, allied to the *Sepia octopodia* of Linnæus, and as a parasitical resident of the above-mentioned shell.

The observations of the late Mr. John Cranch, zoologist to the Congo expedition, have, in the opinion of Dr. Leach, removed all doubt upon this subject. In the Gulf of Guinea he took several specimens of a new species of Ocythoë in a small Argonauta, and placed two of them in a vessel of sea-water, so as to observe their motions. When adhering to the basin the shell could be removed; they had the power both of retiring within it and of entirely quitting it. One having left the shell lived several hours, and showed no desire to return. Others quitted the shell while taking up the net. Ocythoë differs from the Polypus in the shortness of its arms; in having pedunculated instead of simple suckers; in having four oblong spots on the inside of the tube, and a small fleshy short tubercle immediately above the bronchiæ, on each side,—a character common to this genus, to Loligo, and to Sepia, but which does not exist in Polypus.

This paper concludes with a descriptive reference to the drawing, which shows the animal in and out of the shell. It is called by the author *Ocythoë Cranchii*.

The distinguishing Characters between the Ova of the Sepia, and those of the Vermes Testacea, that live in Water, explained. By Sir Everard Home, Bart. V.P.R.S. Read June 5, 1817. [*Phil. Trans.* 1817, p. 297.]

After alluding to the erroneous notions of Linnæus and other naturalists, concerning the animal that forms the shell called Argonauta, and to his own opinion that it is an internal shell, the author proceeds to show that this shell is not the produce of the species of Sepia often found in it, for the ova of this Sepia are not those of an animal of the Order Vermes Testacea. The blood of oviparous animals, while in the egg, is aerated through its coats; but in the Vermes Testacea, if the shell were formed in the egg, the process of aëration would be impeded; so that the animal's shell is formed after it has left the egg. Animals that live in water require some defence while the shell is forming; they are therefore inclosed in a camerated nidus. That of the *Helix ianthina*, taken in the voyage to the Congo,